

I claim:

1. An insect collection device, comprising:
 - (a) a compression chamber movable between an uncompressed position and a compressed position;
 - (b) an elongated housing extending from said compression chamber a selected distance to terminate in a free end to define a housing interior;
 - (c) a partition separating said housing interior into an upstream region, that proximate to said free end and non-adhering to insects, and a downstream region proximate to said compression chamber, said partition constructed to permit airflow between said upstream and downstream regions while impeding passage of insects therebetween; and
 - (d) a movable closure disposed on a free end portion of said housing and operative to move between a first position to hinder access to said upstream region from said free end and a second position to create an entryway into said upstream region from said free end, said movable closure being biased into the first position and adapted upon movement of said compression from the uncompressed position to the compressed position to remain biased into the first position, and wherein said movable closure is urged into the second position upon actuation of said compression chamber from the compressed position to the uncompressed position such that insects in a vicinity of said free end are drawn into said upstream region for collection.
2. An insect collection device according to claim 1 wherein said housing is selectively extensible to vary an effective length thereof.
3. An insect collection device according to claim 2 wherein said housing extends along a central longitudinal axis and includes a plurality of tubular housing

sections that are matable with one another so that the effective length of said housing may be selectively varied.

4. An insect collection device according to claim 3 wherein a primary housing section is releasably attached to said compression chamber and is formed by a pair of primary housing pieces that are matable with one another.

5. An insect collection device according to claim 4 wherein said compression chamber is attached to said primary housing section by a securement clamp.

6. An insect collection device according to claim 3 wherein said movable closure is disposed on a terminal, upstream one of said tubular housing sections.

7. An insect collection device according to claim 1 wherein said compression chamber is a flexible bellows that is mounted to said second end portion.

8. An insect collection device according to claim 1 wherein said compression chamber is resiliently biased into the uncompressed position.

9. An insect collection device according to claim 1 wherein said movable closure is resiliently biased into the first position.

10. An insect collection device according to claim 9 wherein said movable closure is formed by a pair of trap doors that are each spring biased into a closed position.

11. An insect collection device according to claim 1 wherein said compression chamber is in fluid communication with the downstream region of said housing and is operative when moved from the uncompressed position to the compressed position to eject air from said housing interior and to create a vacuum

within said housing interior when allowed to move from the compressed position to the uncompressed position.

12. An insect collection device according to claim 11 including a purge valve associated with said housing and operative as said compression chamber moves from the uncompressed position to the compressed position to allow the air to escape from said housing interior.

13. An insect collection device according to claim 12 wherein said purge valve is movably disposed over an opening formed through said housing.

14. An insect collection device according to claim 1 wherein said compression chamber is biased into the uncompressed position, and including a triggering assembly operative upon actuation to engagedly retain said compression chamber in the compressed position and to selectively disengage from said compression chamber to allow said compression chamber to move from the compressed position to the uncompressed position.

15. An insect collection device according to claim 1 wherein the selected distance between said compression chamber and the free end of said housing remains unchanged during actuation of said compression chamber.

16. A manually actuated insect collection device, comprising:

(a) a compression chamber;

(b) an elongated housing having a proximal end joined to said compression chamber and extending from said proximal end a selected distance to terminate in a distal end thereby to define a housing interior;

(c) a partition disposed within said housing between said proximal and distal ends to separate said housing interior into an upstream region, that is adjacent to said distal end and non-adhering to insects, and a downstream region adjacent to

said proximal end, said partition constructed to permit airflow between said upstream and downstream distal regions while impeding passage of insects therebetween;

(d) a movable closure disposed on a distal end portion of said housing and operative to move between an open orientation to create an entryway into said upstream region from said distal end and a closed orientation to hinder access to said upstream region from said distal end, wherein said compression chamber is operative upon actuation to move from an uncompressed position to a compressed position to eject air from said collection device at a location other than through said distal end, and operative when allowed to return to the uncompressed position from the compressed position to create a vacuum within said housing interior and urge said closure to move into the open orientation so that insects in a vicinity of said distal end are drawn into said upstream region for collection, with said housing being immovable during actuation of said compression chamber from the uncompressed position to the compressed position; and

(e) a triggering assembly coupled to said compression chamber and operative when placed in an engaged state to retain said compression chamber in the compressed position, said triggering assembly further operative when moved from the engaged state to a disengaged state to allow said compression chamber to return to the uncompressed position.

17. An insect collection device according to claim 16 wherein said triggering assembly includes a plunger shaft movable with said compression chamber between a retracted position when said compression chamber is in the uncompressed position and an armed position when said compression chamber is in the compressed position, and wherein said triggering assembly further includes a trigger switch operative to engagedly retain said plunger shaft in the armed position,

thereby to define the engaged state for said triggering assembly, and to release from said plunger shaft to allow said plunger shaft to move from the armed position to the retracted position, thereby to define the disengaged state for said triggering assembly.

18. An insect collection device according to claim 17 including a trigger guard projecting away from said housing on opposite sides of said trigger button.

19. An insect collection device according to claim 17 wherein said plunger shaft has a proximal end connected to a butt end of said compression chamber and extends from said proximal end into the housing interior to terminate at a distal end, and including a notch formed in said plunger shaft between said proximal end and said distal end, said trigger switch being resiliently biased into engagement with said notch when said plunger shaft is in the armed position.

20. An insect collection device according to claim 16 wherein said compression chamber is resiliently biased into the uncompressed position and said movable closure is resiliently biased into the closed position, yet urged into the open position as said compression chamber is returned to the uncompressed position from the compressed position.

21. An insect collection device according to claim 20 wherein said movable closure remains in the closed position as said compression chamber moves from the uncompressed position to the compressed position.

22. An insect collection device according to claim 16 wherein, as said compression chamber moves from the uncompressed position to the compressed position, air is ejected through a purge valve that is movably disposed on a sidewall of said housing between said proximal end and said distal end.

23. An insect collection device according to claim 16 wherein said housing extends along a central longitudinal axis and includes a plurality of tubular housing sections that are selectively matable with one another so that an effective length of said housing may be varied.

24. An insect collection device, comprising:

(a). a tubular housing having a housing sidewall which extends along a longitudinal axis from a downstream end to terminate at an upstream end to surround a housing interior, said housing sidewall having a purge port formed therethrough;

(b). an collection member releasably disposed on an upstream end portion of said housing, said collection member including:

(i). a collection tube adapted to attach to said upstream end and having an outer surrounding collection tube sidewall which surrounds a collection region, wherein the collection tube sidewall is non-adhering to insects in the collection region;

(ii). a partition disposed within said collection tube and extending between opposed sidewall portions thereof, said partition adapted to permit airflow between said collection region and said housing interior while impeding the passage of insects therebetween; and

(iii). a closure disposed on an upstream end of said collection tube and movable between an open orientation whereby insects can be drawn into said collection region and a closed orientation to prohibit insects from entering into said collection region, said closure being biased into the closed orientation; and

(c). a compression chamber disposed on a downstream end portion of said housing in fluid communication with said housing interior, said compression chamber

operative when moved from an uncompressed position to a compressed position to eject air through said purge port, and operative when allowed to return to the uncompressed position from the compressed position to create a vacuum within said housing interior and urge said closure into the open orientation thereby to cause insects in a vicinity of said closure to be drawn into said collection region and be trapped therein as said closure returns to the closed orientation.

25. An insect collection device according to claim 24 wherein at least a portion of said collection tube is transparent to allow for viewing of insects trapped therein.

26. An insect collection device according to claim 24 wherein said collection tube has a circumferential groove formed therein and wherein said partition is a screen mesh seated against said groove.

27. An insect collection device according to claim 26 wherein said screen mesh tapers in the upstream direction toward a central longitudinal axis of said collection tube.

28. An insect collection device according to claim 24 wherein said closure includes an annular ring sized and adapted to fit over said collection tube, and a plurality of closure flaps each having an attached portion secured to a webbing and a free portion to allow said closure flaps to swing about said attached portion as said compression chamber moves from the compressed position to the uncompressed position.